

■ DC Power for
Business-Critical Continuity

EnterpriseIP™ Solution
Adaptive, high-availability power system for IP Telephony





Deploy, Integrate, and Expand VoIP and PoE Applications More Quickly, Reliably and Cost Effectively than Ever Before

The need for a reliable power infrastructure has never been more important, and IT professionals are discovering that DC Power is the key. These experts are recognizing the benefits a DC UPS can provide, especially for applications requiring Power over Ethernet (PoE). But modernizing the infrastructure's technology has proven to be a challenge in designing high-availability, cost-efficient data networks that are as reliable as legacy voice networks.

Now imagine an integrated DC UPS solution that offers "Six Nines" (99.9999%) reliability. One that delivers powerful performance and efficient thermal

management to protect your investment. A complete DC UPS solution that will support all of your current and next generation requirements, while significantly reducing costs.

At Emerson Network Power, we've long realized that DC isn't just for telecom applications anymore. We've taken the proven, adaptive architecture of DC Power and engineered an innovative, new, plug-and-play, custom solution. With it, enterprises can deploy, integrate, or expand Voice over IP (VoIP) and/or PoE applications more quickly, reliably and cost effectively than ever before.

Eliminates the infrastructure issues associated with IP technology deployment

- Inability to deliver high availability
- Footprint constraints in wiring closets
- Lack of monitoring, management and control capabilities
- Inability to support future PoE devices
- Unanticipated equipment powering issues

High Performance Power from a "DC UPS" Solution

Applications:

- Enterprise networks/converged networks –data ,voice, PoE
- Layer 2-4 switches, Sonet , Multiservice Platform switches
- IP PBX's, and hybrid PBX's for larger Enterprises
- High density server clusters
- Any other Enterprise switching and network devices (clusters of devices) which can accept –48VDC

Emerson is proud to announce the first DC UPS solution on the market, NterpriseIP™.

NterpriseIP™ is specifically engineered to address the special challenges of deploying equipment in Telco closets and other tight spaces. It will soon carve its own special niche within growing data network infrastructures where performance expectations are continually rising and budgets are decreasing.

NterpriseIP™'s flexible configurations, driven by your specific business requirements, are created for easy plug-and-play installation with a minimal footprint.

- Electronic Industries Alliance (EIA) compliant cabinet factory pre-wired for maximum output DC power
- Multiple battery strings
- Integrated AC input panel with TVSS protection
- DC power distribution cabling
- Space for your equipment
- Provisions for communications cable management
- Heavy-duty casters for easy maneuverability

Proven Technology.
Innovative New Solution.
Ideal for Converged Networks.



NterpriseIP™ Front View



NterpriseIP™ Rear View

1 DC Power System

2 Switch can be shipped integrated with the solution or be installed on site

3 Optional AC UPS

4 Open Rack Space

5 Batteries with customized back-up time

6 Ground and Alarm Interface Panel

7 AC Panel with TVSS

8 Optional MPM-100 Battery Monitoring

9 Optional Maintenance Bypass for AC UPS

10 Foundation Cabinet

The NterpriseIP™'s extensive monitoring capabilities, easy configuration and maintenance are all backed by the resources and quality reputation of a nationwide service organization.

Deploying DC Power Has Never Been Easier

NterpriseIP™ Solutions are available in three different DC power output capacities — 4500W, 6000W and 15000W. All three systems feature scalable output power and battery back-up. The cabinet's architecture is easy to configure, deploy and expand. Therefore, costly sizing errors will never be an issue.

Standard Features

- Scalable with built in redundancy
- Two battery trays offer a wide selection of back-up times
- Extensive monitoring
 - Web based interface
 - Programmable relay contacts
 - SNMP interface
 - Local and remote control
- Pre-wired in factory for maximum DC system capacity
- Single AC input interface and TVSS for extra protection
- Integrated grounding for all system components
- Rack space for your equipment
- Easy to configure and install

Options

- 1-2 kVA AC UPS (online) for AC powered network equipment
- Battery management and failure prediction monitor
- Extended battery back-up time
- Internal distribution cables for specific configurations

Simple Installation

The NterpriseIP™ ships completely engineered to you from our factory floor already pre-wired for the maximum amount of power. Easy to configure, just add your equipment, and connect the AC source. As an option, we can integrate and customize according to your specific application requirements prior to shipment.

Redundant, Fault Tolerant Architecture

Well known for high performance and dependability, the redundant DC architecture allows for Six Nines availability. It exceeds current data industry expectations to provide high performance power delivery! Its fault tolerant architecture provides prolonged, continuous operation in the unlikely event of multiple failures. The architecture's easy accessibility offers plenty of time to diagnose and correct issues. In addition, replacing major components takes just 30 seconds.

Scalability

The NterpriseIP™ architecture includes hot swapability for plug-in components such as rectifier modules. This minimizes your initial investment by allowing progressive power growth with increasing application demands.

Overload Capability

Designed to operate even with temporary PoE oversubscription (dependent upon battery capacity), NterpriseIP™ allows user ample time to correct abnormal operation.



High Efficiency Solution

A DC UPS is highly efficient. Therefore it contributes minimally to the overall heat load of your network. This efficiency translates not only into reduced electricity costs to operate your power system, but lower cooling costs as well.

Integrated Cabinet Design

Developed by engineers with application expertise, the NterpriseIP™ features a quality, consistent, plug-and-play design. Properly sized and scalable to add components for the next-generation, this integrated solution is ideal for the footprint constraints in your wiring closets.

Maintenance

In multi-site deployments, the consistent design and implementation of the NterpriseIP™ solution provides for a minimum of spare parts. The NterpriseIP™'s extensive monitoring capabilities, easy configuration, and maintenance, are all backed by the resources and quality reputation of a nationwide service organization.



System Specifications (NterpriseIP™– standard configurations)

Electrical parameters

AC input

Nominal Voltage	
Without integral UPS	110/120V or 208/240V, 3 wire
With integral UPS	120/208V, 4 wire (2 phases, neutral and ground)
Operating Voltage range	85VAC to 300VAC
Frequency	47 Hz to 63 Hz
Power factor	>.97 (50% load), >.99 (80% to 100% load)
Harmonic distortion	<5% (70% to 100% load) -meets IEC 1000-3-2
Input Current	Refer to Input AC feeder sizing Table
Surge immunity Protection	ANSI C62.41/IEEE Std. 587 Built in TVSS

DC output

Output voltage ratings	
Nominal	-48VDC
Normal operation	-54VDC
On battery	-42VDC min
Range	-42VDC to -58.5VDC (factory set at 42-56V)
Regulation	+/_ 0.5% for all load and input voltage variations

Operating and environmental parameters

Efficiency	90 - 91% from 40-100% load (at 240V) 91.5% max
Operating temperature	System -40C to +50C Rectifiers - 40C (-40F) to +75 C (167F) at full rated output
Humidity	0 to 95% non condensing
Storage temperature	-40 °C to +75 °C
Audible noise	Less than 60 dBA when measured 0.5m from the equipment and 1.5m above the floor
Ventilation	Speed controlled fans – front to back air flow
EMC/EMI (DC UPS)	FCC part 15, subpart B and Telcordia GR-1089_CORE & emissions for Class B, EN 300386
Operation without batteries	Yes
Battery temp comp charging	Yes
Battery Low Voltage Disconnect	Yes (protects batteries from deep discharges)

Batteries

- Telecommunication grade VRLA technology
- 10 year design life 25C(77F)
- Front terminal construction
- Front replaceable
- Flame-retardant reinforced container and cover compliant with UL 94 V-0

Cabinet (enclosure)

- 19" mounting space (per EIA) for your equipment
- Totally enclosed
- Front and rear lockable doors
- Wire channels for Ethernet cables
- Perforated sides for ventilation
- Casters
- Internal temperature monitoring

Monitoring

Local - LCD display with four navigation buttons

Remote

- 8 dry C contacts (5 are programmable)
- Web (HTML) – embedded web browser (HTTP)
- SNMP

Communication Ports

- RJ45 jack for Ethernet port
- DB9 connector for RS-232



Emerson Network Power—
 a complete spectrum of best-in-class
 reliable power, precision environmental and
 connectivity solutions for today's
 telecommunications and
 data network infrastructure

Agencies

- NterpriselP System - UL 60950 listed
- DC UPS - NEBs level 3 certified, meets FCC class B
- All materials have a flammability rating of UL94V0 or better

Options

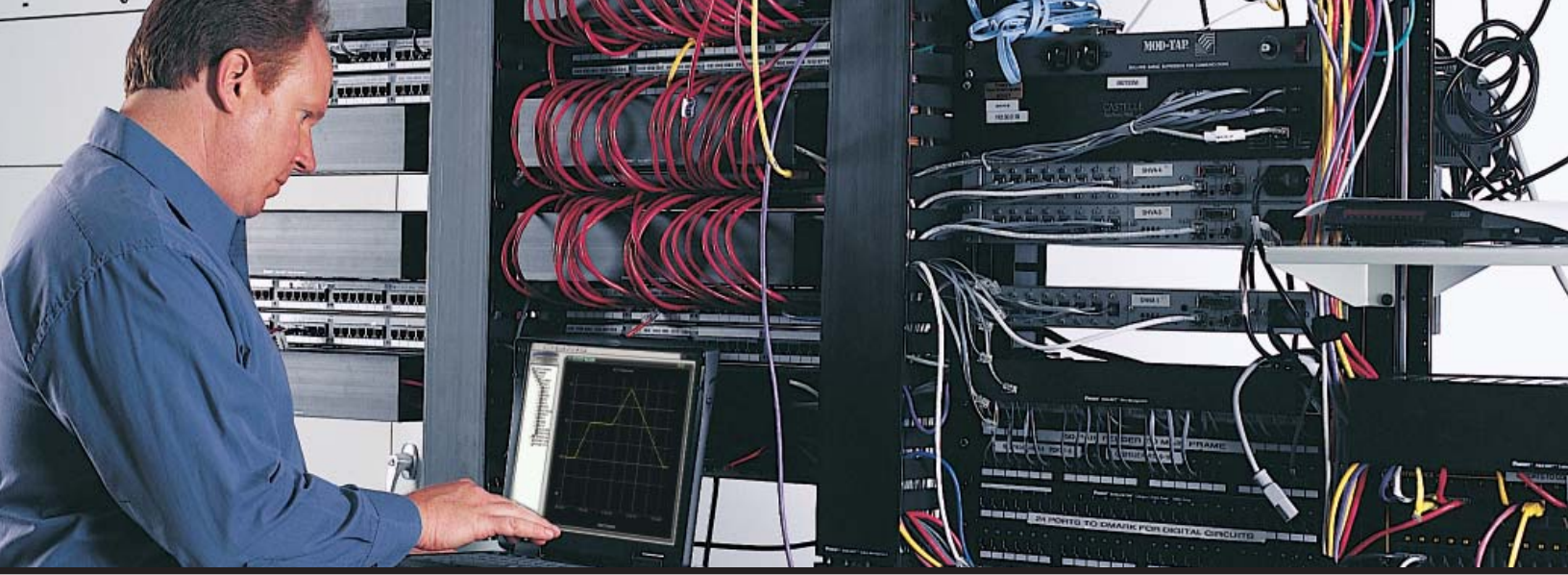
- 1-2kVA UPS with maintenance bypass
- Battery diagnostic and failure prediction monitor
- User specific output cables
- Multiple AC input interfaces

Typical Battery Back-up

Load W	1 tray	2 trays	3trays	4 trays	1 tray	2 trays	3 trays	4 trays	1 tray	2 trays	3 trays	4 trays
	105Ah Batt1	105Ah Batt1	105Ah Batt1 Note1	105Ah Batt1 Note1	125Ah Batt2	125Ah Batt2	125Ah Batt2 Note1	125Ah Batt2 Note1	155Ah Batt3	155Ah Batt3	155Ah Batt3 Note1	155Ah Batt3 Note1
	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
500	570	1320	1620	>1800	700	1600	>1800	>1800	840	1800	>1800	>1800
1000	250	570	1080	1320	330	700	1200	1500	420	840	1440	1800
1500	150	360	570	840	200	480	700	1080	240	600	840	1320
2000	105	250	420	570	140	330	550	700	180	420	680	840
3000	65	150	250	360	90	200	330	480	105	240	420	600
4000	45	105	180	250	60	140	240	330	75	180	300	420
4500	40	80	150	235	50	130	210	300	70	150	270	360
5000	33	85	140	200	45	100	180	270	55	135	220	330
6000	25	65	105	150	35	90	140	200	40	105	180	240
7000	20	55	90	125	29	75	125	180	32	90	150	210
8000	16	45	80	105	22	60	110	140	29	75	125	180
9000	14	39	65	95	16	50	90	130	27	65	105	160
10000	12	33	58	88	14	45	70	120	26	55	85	135

Notes:

1. Requires additional cabinet
2. Contact your representative for longer back-up times



Dimensions and weights

NterpriseIP™	Height in/cm	Width in/cm	Depth in/cm	Space for OEM equipment	Weight w/o batteries	Max weight with batteries
4500	79.7	29.2	44.9	25U	700 lbs	1650 lbs
6000	79.7	29.2	44.9	20U	750 lbs	1700 lbs
15000	79.7	29.2	44.9	16U	850 lbs	1750 lbs

Input AC Feeder sizing

NterpriseIP™ Size	Number of Rectifiers	Initial Rating Redundant Watts	Max Rating Redundant Watts	Single Feed 208v
4500	2	1500	4500	20A
6000	3	3000	6000	30A
15000	4	4500	15000	40A
6000	5	6000	6000	50A
15000			15000	
15000	6	7500	15000	60A
	7	9000	15000	70A
	8	10500	15000	80A
	9	12000	15000	90A
	10	13500	15000	100A
	11	15000	15000	120A

Notes:

1. Contact your representative for 120V feeders sizes and multiple AC input option
2. Contact your representative for input sizing when UPS option is selected